ISS On-Orbit Status Report

Month: October 2015

ISS Daily Summary Report – 10/28/15

Extravehicular Activity (EVA) #32: EVA Crew-1 (EV1) Kelly and EV2 Lindgren egressed the Airlock at 7:03am CDT for EVA #32. The Phase Elapsed Time was 7 hours and 16 minutes. Prior to egress, for a short period of time, EV2 bumped the position of the water valve on his suit. The suit was cleared to proceed after verification that water was not sublimating and the suit operated nominally throughout the EVA. There will be an additional water recharge and inspection completed on that suit prior to the next EVA.

The planned objectives for the EVA were as follows:

- Alpha Magnetic Spectrometer (AMS) Blanket and TTCS Wedge Install

- Main Bus Switching Unit (MBSU) Multi-Layered Insulation (MLI) Removal and Skirt Tie-Down
- Space Station Remote Manipulator System (SSRMS) Latching End Effector (LEE)-B Lube
- Pressurized Mating Adapter (PMA)-3 / International Docking Adapter (IDA)-3 Cable Route
- Node 3 (N3) Non-Propulsive Vent (NPV) Install

The crew fully completed the AMS and MBSU tasks. They completed the high priority LEE Lube tasks for lubing the ball screws and linear bearing tracks. The lower priority task of lubing the equalization brackets and rollers was not completed. The crew completed the PMA-3 IDA-3 cable routing and the aft portion of the PMA-3 power cable routing. The forward portion of the PMA-3 power cable routing and the N3 NPV install were deferred to a future EVA. The deferred tasks are not an impact to current ISS operations.

Plasma Kristall-4 (PK-4) Operations: Kononenko provided support for the PK-4 experiment started yesterday by exchanging data hard drives. Plasma Kristall-4 is a complex European Space Agency (ESA) plasma laboratory installed in the Columbus European Physiology Module (EPM) rack and operated by Russian crewmembers. PK-4 supports research in the field of Complex Plasmas: low temperature gaseous mixtures composed of ionized gas, neutral gas and micron-sized particles. The micro-particles become highly charged in the plasma and interact strongly with each other, which can lead to a self-organized structure of the micro-particles (i.e., “plasma crystals”).

Reaction Self Test: Kelly will complete a session today for the Reaction Self Test investigation. Reaction Self Test helps crewmembers objectively identify when their performance capability is degraded by various fatigue-related conditions that can occur as a result of ISS operations and time in space (e.g., acute and chronic sleep restriction, slam shifts, extravehicular activity (EVA), and residual sedation from sleep medications).

Sleep Log: Kornienko recorded a Sleep Log entry today. The Sleep ISS-12 experiment monitors ambient light exposure and crew member activity and collects subjective evaluations of sleep and alertness. The investigation examines the effects of space flight and ambient light exposure on sleep during a year-long mission on the ISS.

Today's Planned Activities

All activities are on schedule unless otherwise noted.

- NEIROIMMUNITET. Saliva Test
- Closing USOS Window Shutters
- Photo/TV EVA Camera Test
- ISS HAM RADIO Power Down
- EVA CUCU Deactivation
- EMU Preparation for US EVA
- SEISMOPROGNOZ. Downlink data from Control and Data Acquisition Module (МКСД) HDD (start)

- Restoring Makita Battery – Equipment setup, assemble charging setup
- Comm configuration for EVA
- PLAZMENNIY KRISTALL. Hard Drive Exchange
- MOTOCARD. Experiment
- EMU Prep for EVA
- Prebreathe in EMU
- Makita tool battery discharge
- COSMOCARD. Setup. Starting 24-hr ECG Recording
- Installation of Makita battery No.1 to charge
- Brine (urine) transfer from EDV-U to Progress 429 (SM Aft) Rodnik БВ1 tank
- Repair and Installation of Overlay Panels on SM panel 322 -Search for and Configure Equipment
- Crew Lock Depress
- Remove battery No.1 from charge, Install Makita tool No.2 to charge
- Soyuz 717 Samsung tablet charge – start
- NEIROIMMUNITET. Closeout Ops
- Main Bus Switching Unit (MBSU) USOS EVA Tasks
- AMS blanket install
- Remove battery 2 from charge, Install Makita tool battery No.7 to charge
- CALCIUM. Experiment Session 11
- Progress 429 (SM Aft) Transfers and IMS Ops
- SM Ventilation System Preventive Maintenance. Group B1
- Relocating PBAs for upcoming EVA
- Main Bus Switching Unit (MBSU) USOS EVA Tasks
- USOS EVA PMA3 Cable Routing
- USOS EVA LEE (SSRMS) Lube
- SSRMS Motion for LEE Lube
- Remove battery No.7 from charge, Install Makita tool battery No.8 to charge
- СОЖ maintenance
- Soyuz 717 Samsung tablet charging – end

- USOS EVA PMA3 Cable Routing Tasks
- Life On The Station Photo and Video
- Terminate Makita Battery No.8 charge, Configuration Teardown, Battery and Equipment Stowage
- NPV Installation
- USOS EVA PMA3 Cable Routing Tasks
- IMS Delta File Prep
- INTERACTION-2. Experiment
- Crew Lock Ingress
- Closing USOS Window Shutters
- SEISMOPROGNOZ. Download data from Control and Data Acquisition Module (МКСД) HDD (end) and start backup
- EVA Glove Photo Setup
- Crew Lock Pre-Repress
- Crew Lock Repress
- USOS Post-EVA Cleanup
- Return to nominal comm configuration after USOS EVA
- Hematocrit. Hardware Setup
- EVA Camera Reconfig
- EMU Glove photos downlink
- Reaction Self-Test (Sleep) **[Scheduled just prior to crew sleep]**

Completed Task List Items

- None

Ground Activities

All activities are on schedule unless otherwise noted.

- System commanding in support of EVA

Three-Day Look Ahead:

Thursday, 10/29: 1/2 Duty Day, Post EVA Activities, Plant Gravity Sensing 2, VIABLE Training

Friday, 10/30: EVA Preparation, JEMAL ExHAM install

Saturday, 10/31: Weekly Cleaning, Crew Off Duty

QUICK ISS Status – Environmental Control Group:

Component	Status
Elektron	Off
Vozdukh	Manual
[CKB] 1 – SM Air Conditioner System ("SKV1")	On
[CKB] 2 – SM Air Conditioner System ("SKV2")	Off
Carbon Dioxide Removal Assembly (CDRA) Lab	Off

Carbon Dioxide Removal Assembly (CDRA) Node 3	Operate
Major Constituent Analyzer (MCA) Lab	Shutdown
Major Constituent Analyzer (MCA) Node 3	Operate
Oxygen Generation Assembly (OGA)	Process
Urine Processing Assembly (UPA)	Standby
Trace Contaminant Control System (TCCS) Lab	Off
Trace Contaminant Control System (TCCS) Node 3	Full Up

cosbourn / October 28, 2015 / October